

REMARKS/ARGUMENTS

Claims 20, 24, 35, 37, 50, 51 and 53-55 are pending in the present application. No amendments have been made to the claims with the filing of this response. Applicant thanks the Office for withdrawing the previous rejections under 35 U.S.C. § 103.

Reconsideration of the present claims is requested in view of the remarks below.

Claim Rejections Under 35 U.S.C. § 103

Claims 20, 24, 35, 37, 50, 51, 53, 54 and 55 have been rejected under 35 U.S.C. § 103(a) as obvious over Leung (US 2002/0137260) in view of Matijev (US 5,900,223). Claim 54 has also been rejected under 35 U.S.C. § 103(a) as obvious over Leung in view of Matijev, and further in view of Yokouchi (US 5,143,637). Applicant disagrees and traverses the above rejections for the following reasons.

Leung does not describe or suggest the claimed invention, in accordance with the provisions of MPEP § 2143 (indicating the basics for determining *prima facie* obviousness). Moreover, there is no reason or evidence that would have prompted or led one to modify Leung with the disclosures of Matijev and/or Yokouchi, in view of the recent guidance set forth by the Supreme Court and re-emphasized by the Federal Circuit, discussed *infra*.

In particular, the U.S. Court of Appeals for the Federal Circuit ("Federal Circuit") recently ruled in chemical cases, such as *Takeda Chemical Industries, Ltd. v. Alphapharm Pty., Ltd.* 492 F.3d 1350 (Fed. Cir. 2007) ("*Takeda*"), although flexibility is required under the *Graham v. John Deere* (citations omitted) standard of determining obviousness, one inflexible rule is that a *prima facie* obviousness rejection requires at least "some reason" that would have led a chemist to modify the prior art in a particular manner. *Takeda*, 492 F.3d at 1357 (explaining that "it remains necessary to identify some reason that would have led a chemist [to make the modification]" based on the standards discussed in *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007)).

Regarding Leung, the reference does not describe or suggest a dielectric thin film with relative dielectric constant greater than 10 consisting essentially of, a solution or dispersion of surfactant-coated nanoparticles in an organic solvent, in the manner presently claimed. It is

noted that the Office alleges that the reference describes “nanoparticles . . . coated with a surfactant (paragraph 0021).” (Page 2, paragraph 2 of the present Office Action).

However, Leung merely recites that “[a]dditional additives such as surfactants . . . or binders may also be present in the dispersion.” (Paragraph [0021] of the reference). By contrast, as pointed out in the Amendment/Response filed June 27, 2007, at page 5, specifically coating with the surfactant prevents the particles from aggregating. (See also the present specification, e.g., at page 9, lines 11-12 (indicating that the surfactants are attached to the particles)).

Moreover, regarding the dielectric materials described in Leung, the reference generally indicates that “[o]xides and nitrides of silicon, oxides and nitrides of aluminum, and oxides and nitrides of boron are useful,” particularly “colloidal silica.” (Paragraph [0008] of the reference). However, contrary to the present invention or any of the other cited references, Leung recites that when the dielectric material is formed and deposited as a film, an intermediated layer of the film is “infiltrate[ed] a liquid phase matrix material” (e.g., with “spin-on polymers”). (Paragraphs [0009] and [0010] of the reference). (See also paragraph [0033], indicating that the matrix material may be pre-mixed with the dielectric material). According to the reference, the film is “intentionally modified” for the beneficial results obtained in “pre-metal dielectric and shallow trench solution applications.” (Paragraph [0017] of the reference).

Regarding Matijev, the reference generally describes the synthesis of perovskite-type oxide compounds. (See column 4, line 57 to column 5, line 13). However, this disclosure clearly does not cure the deficiencies of Leung, since the reference does not describe surfactant coating or relate to any matrix material infiltration. The reference merely indicates that surfactants and several other types of materials may be added to the reaction mixture to control particle size. (See column 7, lines 7-14). As such, there is no evidence that one would have been prompted to completely substitute Leung’s dielectric materials and “intentional modification” specifically for the perovskite-type oxides.

Similarly, regarding Yokouchi, there is clearly no reason that one would look to the reference to cure the deficiencies of Matijev or Leung, since the reference relates to, *inter alia*, a “low-viscosity magnetic fluid,” and not the formation of any *film* consisting essentially of the components of the claimed invention. (See, e.g., column 1, lines 51-65).

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Therefore, the claimed invention is not obvious over the combined cited references.  
Accordingly, the withdrawal of the rejections is requested.

In view of the above remarks, Applicant believes that the pending application is in condition for allowance.

In the event the Office believes an interview might serve in any way to advance the prosecution of this application, the undersigned is available at the telephone number noted below.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0510, under Order No. YOR920010255US2 from which the undersigned is authorized to draw.

Dated: December 10, 2007

Respectfully submitted,

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